APPENDIX A

"CLEAN" VERSION OF EACH PARAGRAPH/SECTION/CLAIM
37 C.F.R. § 1.121(b)(ii) AND (c)(i)

SPECIFICATION:

Paragraph at page 1, line 19 to page 1, line 25:

For example, as a gate insulation film, a high dielectric constant material such as Al_2O_2, HfO_2 or ZrO_2 is used instead of the conventional thermal oxide film (that is, a silicon oxide film thermally oxidized at an oxygen atmosphere).

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In addition, as a capacitor dielectric film of a DRAM, a high dielectric constant material having a component of such as a BST (Barium-Strontium-Titanate) or a PZT (Lead-Zirconium-Titanate) draws more attention instead of a silicon nitride film, using a chemical vapor deposition.

Paragraph at page 2, line 14 to page 2, line 20:

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According to the ALD method, since a thin film can be formed simply by the chemical reaction on the substrate surface, a uniform thickness of thin film can be grown regardless of irregularities of the surface of the substrate. In addition, since the deposition of a film is in proportion to a material supply cycle rather than in proportion to time period, the thickness of the film can be precisely controlled. A textbook edited by T. Suntola and M. Simpson eds. "Atomic Layer Epitaxy", Blackie, London, 1990 provides good explanation of the ALD method.

Paragraph at page 3, line 5 to page 3, line 14:

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According to this method, in brief, in a state that the temperature in the reactive chamber 100 is raised to be maintained at the temperature of 150°C and the temperature of the substrate 130 mounted on the suscepter 120 inside the reactive chamber 100 is maintained at 370°C. Trimethyl aluminum, purge argon (Ar), vapor and purge argon are repeatedly supplied sequentially for 1 second, 14 seconds, 1 second and 14 seconds. This process in which trimethyl aluminum, purge argon (Ar), vapor and purge argon are repeatedly supplied sequentially for

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1 second, 14 seconds, 1 second and 14 seconds is defined as one period for supplying materials. Accordingly, one period for supplying materials is 30 seconds obtained by adding the injection time period of gases.

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[Paragraph at page 5, line 9 to page 5, line 20:]

That is, when the process is performed, the gas supply cycle is divided into several steps of injecting the source gas and the reactive gas and purging the gas. Thus, the number of the processed semiconductor substrate per time period is small, which is a burden on improvement of productivity.

Meanwhile, in the case that a multicomponent material such as a BST is technically deposited by using the conventional ALD method and apparatus, since an adsorption temperature and a reactive temperature are varied depending on a source gas containing each component, the temperature of the substrate should be differently set and controlled when the source gas is injected. This would inevitably face a considerable reduction of a throughput of a wafer per time period (because after a temperature is changed, it should wait a certain time to stabilize the temperature), resulting in a substantial decrease of productivity.

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[Paragraph at page 6, line 13 to page 6, line 16:]

Another object of the present invention is to provide an apparatus and method for forming an ultra-thin film of a semiconductor device which is capable of increasing the deposition speed of a film by removing a purging process of an inert gas and shortening a supply cycle of a material gas.

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[Paragraph at page 12 line 10 to page 12, line 14:]

That is, the first material gas and the second material gas are introduced into the reactive chamber 310 through different material gas supply pipes, so that a process for purging the material gas supply pipe and the reactive chamber before a different material gas is supplied can be applied after a material gas has been supplied.